IL'YUSHCHENKO, I.A.

Economy and foreing trade of Great Britain. Visnyk AN URSR 27 no.10:14-27 O '56. (MLRA 10:1)

(Great Britain--Economic conditions) (Great Britain--Commerce)

Il'yushchenko, K.S.

USSR/Cultivated Plants - Fruits. Berries. M

Abs Jour : Ref Zhur Biol., No 18, 1958, 82506

Author : Il'yushchenko, K.S., Varentsov, I.I.

Inst : All-Union Scientific Research Institute of the Canning and Vegetable Deying Industry

Title : Local Canning Varieties of Quince.

Orig Pub : Referaty nauchn. rabot. Vses. n.-i. in-t konservn. i ovoshchesush. prom-sti, 1957, vyp. 4, 119-124

Abstract : A network of experimental stations and experimental points of the Institute recommend for a temporary assortment for different zones more than 54 varieties of which 43 are local varieties. A brief characteristic of them is cited.

Card 1/1

ACC NR: AT7005248 SOURCE CODE: UR/2631/66/000/008/0079/0084

AUTHOR: Belyayeva, G. I.; Anfinogenov, A. I; Solomatin, V. Ya; Ilyushchenko, N. G.

ORG: none

TITLE: On the structure and properties of an electrolytic aluminum coating on molybdenum

SOURCE: AN SSSR. Ural'skiy filial. Institut elektrokhimii. Trudy, no. 8, 1966. Elektrokhimiya rasplavlennykh solevykh i tverdykh elektrolitov; fiziko-khimicheskiye svoystva elektrolitov i elektrodnyye protsessy (Electrochemistry of fused salts and solid electrolytes; physicochemical properties of electrolytes and electrode processes), 79-84

TOPIC TAGS: metal plating, molybdenum, metal coating

ABSTRACT: Aluminum coatings deposited on molybdenum by electrolyzing a fused electrolyte of the composition (wt. %) $BaCl_2$ 73, NaF 11.5, AlF_3 15.5 were studied by metallographic and x-ray structural analyses, by measuring the polarization of the molybdenum cathode, and by determining the high-temperature strength and oxidation resistance. The phase composition of the Al coating was studied as a function of the electrolysis conditions (current density and time). Electrolytic saturation of the molybdenum surface with aluminum was found to lead to the formation of two- and three-layer coatings, depending upon the electrolysis conditions. To protect molybdenum from high-temperature oxidation, an aluminum coating of the composition Al, $MoAl_{12}$,

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ACC NR: AT7005248

Mo_3Al_8 is recommended. A coating of this composition can be obtained at 900° and current densities of 0.1-0.15 A/cm^2. Up to 30 min is necessary for the formation of a coating 50 μ thick. Orig. art. has: 5 figures and 2 tables.

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 005/ OTH REF: 013

Card 2/2

ANFINOGENOV, A.I.; SMIRNOV, M.V.; ILYUSHCHENKO, N.G.

Electrolytic deposition of beryllium on copper in fused salts. Trudy Inst.elektrokhim. UFAN SSSR no. 4:47-53 '63. (MIRA 17:6)

31671
S/631/60/000/001/008/014
B117/B147

5.4700

AUTHORS: Ivanovskiy, L. Ye., Ilyushchenko, N. G., Zyuzev, V. L., Plekhanov, A. F.

TITLE: Oxychlorides of rare earths of lowest valencies

SOURCE: Elektrokhimiya rasplavlennykh solevykh i tverdykh elektrolitov, no. 1, 1960, 55-60

TEXT: The interaction of oxygen and rare earth metals with chloride melts of rare earths was studied. In the first series of experiments, the authors used a misch metal (% by weight: 22.5 La, 53.0 Ce, 4.53 Pr, and 16.3 Nd) obtained by electrolysis, and a chloride mixture (% by weight: 26 La, 53.9 Ce, 4.85 Pr, 11.42 Nd) obtained by chlorination of oxides of rare earths with gaseous chlorine in the presence of carbon. The result was a deposit of oxychlorides of lowest valency: Me_2OCl_2, where Me stands for La, Ce, Pr, and Nd. This mixture is slowly hydrolyzed in water to give hydrates of highest valency. When boiling, decomposition proceeds rather quickly. During heating, the product readily reacts with acids, particularly

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nitric acid. It oxidizes easily at 300-400°C forming mixtures of oxides of rare earths at higher temperatures. In another series of experiments, the reaction of oxygen with chlorides of rare earths in an open bath at 580 - 600°C was studied. A graphite vessel was used as electrolyzer and anode, and molybdenum rods were used as cathodes. The electrolyte was a mixture of chlorides of rare earths and potassium chloride (50% $MeCl_3$ and KCl). The amount of lowest oxychlorides formed in all experiments depended on the amount of products in the bath obtained by decomposition of salts under the action of oxygen and moisture. Finally, the misch metal in the potassium chloride melt was anodically dissolved at 850°C in an open and a closed bath. The authors always found oxychlorides of lowest valencies with a ratio equal to that of initial substances. Summary: In the case of interaction between oxygen, chloride melts of rare earths, and misch metal mixtures of low-valency oxychlorides of rare earths were obtained. The summational reaction can be written down: $4MeCl_3 + 3O_2 + 8Me = 6\ Me_2OCl_2$. The formation of oxychlorides on the cathode may be explained by the formation of Me_2OCl_4 soluble in the melt by

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S/631/60/000/001/008/014
B117/B147

Oxychlorides of rare earths of lowest ...

decomposition of salts. The formation of $Me_2OCl_2^{++}$, whose discharge on the cathode yields Me_2OCl_2, is well possible. At the same time, direct reaction of decomposition products with the metal deposited on the cathode is also possible. Bivalent chlorides of rare earths are formed in the melt due to anodic dissolution of the misch metal. Their reaction with oxygen also yields oxychlorides of the same composition. There are 4 figures, 2 tables, and 5 references: 4 Soviet and 1 non-Soviet.

X

Card 3/3

ANFINOGENOV, A.I.; BELYAYEVA, G.I.; SMIRNOV, M.V.; ILYUSHCHENKO, N.G.

Structure and phase composition of beryllium coating on copper obtained by the electrolysis of fused salts. Trudy Inst. elektrokhim. UFAN SSSR no. 4:55-66 '63. (MIRA 17:6)

ACCESSION NR: AT4008733 S/2631/63/000/004/0055/0066

AUTHOR: Anfinogenov, A. I.; Belyayeva, G. I.; Smirnov, M. V.; Ilyushchenko, N. G.

TITLE: Structure and phase composition of beryllium coatings deposited on copper in fused salt electrolytes

SOURCE: AN SSSR. Ural'skiy filial. Institut elektrokhimii. Trudy*, no. 4, 1963. Elektrokhimiya rasplavlenny*kh solevy*kh i tverdy*kh elektrolitov, 55-66

TOPIC TAGS: beryllium coating, beryllium plating, beryllium plated copper, coating structure, coating phase composition, fused salt electrolysis, fused salt, beryllium electrodeposition

ABSTRACT: Rates of Be deposition (i.e. cathode current density) and mutual diffusion of Be and Cu (i.e. temperature and duration of electrolysis) were studied in relation to their effects on the structure and phase composition of coatings deposited on a cathode during electrolysis in fused salts. Be was deposited on Cu cathodes in a fused electrolyte (eutectic mixture of KCl + NaCl + 16% $BeCl_2$ by weight at temperatures of 710, 750, 800 and 835°C, current densities of 0.004, 0.01, 0.02 and 0.04 a/cm^2 and exposures of 1, 2, 4, 6 and 8 hours. The electrolytic cell was described in AN SSSR, Ural'skiy filial. Institut elektrokhimii. Trudy*, no. 4, 1963, 47-53. The results tabulated in the original and shown

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ACCESSION NR: AT4008733

In Figs. 1, 2, 3 and 4 in the Enclosure indicate that cathode deposition of Be on Cu is accompanied by the formation of deposits consisting of one or more phases. Structure of the deposits is determined by current density, temperature and duration of the electrolytic process. It was also demonstrated that such conditions of the process promote the most rapid formation and accumulation of the β-phase. Microstructure of the BeCu coating is shown on several microphotographs for the α, β and γ phases. G. V. Burov, staff member of the Institute, performed the structural x-ray analysis. G. V. Chentsovaya and L. P. Tomilovaya, other members of the Institute, performed the spectral analysis. Orig. art. has: 2 tables, 4 graphs, 7 illustrations.

ASSOCIATION: Institut Elektrokhimii, Ural'skiy filial AN SSSR (Institute of Electrochemistry, Ural branch AN SSSR)

SUBMITTED: 00 DATE ACQ: 25Jan64 ENCL: 06

SUB CODE: ML, MA NO REF SOV: 011 OTHER: 002

Card 2/2

ACC NR: AR6035432 SOURCE CODE: UR/0275/66/000/008/B064/B064

AUTHOR: Belyayeva, G. I.; Anfinogenov, A. I.; Solomatin, V. Ye, Ilyushchenko, N. G.

TITLE: Structure and properties of an electrolytic aluminum coating on molybdenum

SOURCE: Ref. zh. Tekhnologiya mashinostroyeniya, Abs. 8B410

REF SOURCE: Tr. In-ta elektrokhimii. Ural'skiy fil. AN SSSR, vyp. 8, 1966, 79-84

TOPIC TAGS: molybdenum, electrolytic deposition, aluminum plating, metal coating, surface hardness

ABSTRACT: The authors present results of investigations of the structure and properties of aluminum coatings on molybdenum, produced by electrolysis of molten salts. For the alitiration of the molybdenmum (sintered rod), an electrolyte was used with composition (% by weight) $BaCl_2$ 73, NaF 11.5, AlF_3 15.5. The surface of the sample was polished before the alitiration. The structure and the composition of the obtained coating were investigated metallographically and by x ray structure methods. The microhardness distribution over the depth of the coating was measured with a PMT-3 instrument with a 20 gram load. The tests for heat endurance were made at 1200° in air. It is shown that the electrolytic saturation of the molybdenum surface with aluminum leads to formation of two- and three-layer coatings, depending on the electrolysis conditions; to protect the molybdenum against the high-temperature oxidation, aluminum coatings with compositions Al, $MoAl_{12}$, and Mo_6Al_8 are recommended; a coating of a given composition can be obtained at a temperature of 900°, current density 0.1

Card 1/2 UDC: 621.357.7:669.718

ACC NR: AR6035432

- 0.15 a/dm^2. Up to thirty minutes are required to produce a coating of 50 μ thickness. [Translation of abstract]

SUB CODE: 13, 07

Card 2/2

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R000618520020-7"

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R000618520020-7"

ILYUSHCHENKO, N.G.

SMIRNOV, M.V.; ILYUSHCHENKO, N.G.

Hydrolysis of thorium fluoride in molten salts. Izv.vost.fil.AN SSSR no.4/5:114-118 '57. (MIRA 10:9)

1. Ural'skiy filial Akademii nauk SSSR.
(Thorium fluorides) (Alkali metal chlorides) (Hydrolysis)

ANFINOGENOV, A.I.; SMIRNOV, M.V.; ILYUSHCHENKO, N.G.; KELYAKEVA, G.I.

Study of the thermodynamics of the beryllium - copper system by the electromotive force method. Trudy Inst. elektrokhim. UFAN SSSR no.3:83-100 '62. (MIRA 16:6)

(Beryllium-copper alloys--Thermodynamic properties)
(Electromotive force)

BELYAYEVA, G.I.; SHCHETNIKOV, Ye.N.; ILYUSHCHENKO, N.G.

Possibility of obtaining heat-resistant coatings on molybdenum by the use of the electrolytic method. Trudy Inst. elektrokhim. UFAN SSSR no.3:101-110 '62. (MIRA 16:6)

(Heat resistant alloys) (Molybdenum)
(Electrolysis)

IL'YUSHCHENKO, N.G.

USSR/Physical Chemistry - Thermodynamics, Thermochemistry, Equilibria, Physical-Chemical Analysis, Phase Transitions. B-8

Abs Jour: Referat. Zhurnal Khimiya, No 2, 1958, 3796.

Author : M.V. Smirnov, N.G. Il'yushchenko, S.P. Detkov, L.Ye. Ivanovskiy.
Inst :
Title : Solubility of Thorium in Liquid Zinc.

Orig Pub: Zh. fiz. khimii, 1957, 31, No 5, 1013-1018.

Abstract: Alloys of Zn with Th containing up to 25% by weight of Th were investigated by the methods of electron-photographic, metallographic and thermal analyses. The structural component alloys are practically pure Zn and the metallic compound Th_2Zn_{17} (I), the composition of which has been established by chemical analysis. The solubility of Th in Zn was determined, it is $3.55 \cdot 10^{-3}$ % at 419.4° and 1.44% at 907°. It was found that the isobaric potential changes at the formation of I from the elements, and the activities with activity factors of Th in the binary alloy I

Card : 1/2 -34- Ural Branch, AS USSR Sverdlovsk

IL'YUSHCHENKO, N.P.

Arsenic as a geochemical indicator in prospecting for copper-skarn ore bodies. Izv. AN Kazakh. SSR. Ser. geol. 22 no.1:85-89 Ja-F '65. (MIRA 18:6)

1. Institut geologicheskikh nauk im. K.I. Satpayeva, g. Alma-Ata.

KULKASHEV, N.T.; IL'YUSHCHENKO, N.I.; POMICHEV, V.I.

Structural control of mineralization in the Sayak deposit.
Izv. AN Kazakh. SSR Ser. geol. 22 no. 6:35-47 N-D '65
(MIRA 19:1)

1. Institut geologicheskikh nauk imeni K.I. Satpayeva, Alma-Ata.

S/169/62/000/007/060/149
D228/D307

AUTHORS: Ignat'yeva, T. S. and Il'yushchenko, N. P.

TITLE: Experimental study of the forms of rare metal replacement in pegmatite veins by applying the micromagnetic survey method of increased precision

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 7, 1962, 29-30, abstract 7A194 (Tr. Vses. n.-i. in-ta metodiki i tekhn. razvedki, sb. 3, 1961, 285-292)

TEXT: Sections of three deposits were surveyed micromagnetically in order to study the microfissuring of pegmatite veins. The statistical processing of the measurement results provided for the construction of roses of the ΔZ isodynamic line directions. In the first deposit the rose diagram exposes no prevalent isoline directions. This is due to the complexity of the tectonic conditions and to the existence of diverse fissuring direction. There are four clearest isoline directions in the second deposit. Two are connected with the general direction of the vein's strike; the other two

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Experimental study of ... S/169/62/000/007/060/149
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are connected with the orientation of the rare-metal replacement sections, which extend along the boundaries of structural mineralogic zones. In the third deposit, characterized by the highest intensity of metasomatic replacement processes, only one prevalent isodynamic line direction is actually displayed; it coincides with the vein's strike. Such a picture compels one to suppose that there is a considerable degree of regulation in the orientation of fissures, assembled in the independent zone of metasomatic replacement. The great opportunities of micromagnetic surveying are noted for the study of the microfissuring of pegmatite veins and its related rare-metal replacement pattern. [Abstracter's note: Complete translation.]

Card 2/2

IL'YUSHCHENKO, T.A.

Social and political life at the Institute of Forestry in the period 1900-1907 '61. (MIRA 16:2)
(Leningrad—Students) (Leningrad—History)

ILYUSHCHENKO, V.; SHLYGIN, A.

Effect of arsenic on catalytic, adsorptive, and electrochemical properties of platinized platinum. Izv.AN Kazakh.SSR Ser.khim. no.3: 12-23 '49. (MLRA 9:8)

(Arsenic) (Electrodes, Platinum)

ILYUSHCHENKO, V.; SHLYGIN, A.

Effect of atomic mercury on the adsorptivity and catalytic activity of platinized platinum. Izv.AN Kazakh.SSR Ser.khim. no.3:24-32 '49. (MLRA 9:6)

(Mercury) (Electrodes, Platinum)

ILYUSHCHENKO, V.M.

5(2) 6 r, 3 PHASE I BOOK EXPLOITATION SOV/1699

Akademiya nauk Kazakhskoy SSR. Institut khimicheskikh nauk

Issledovaniya po elektrokhimii vodnykh rastvorov i rasplavov i amal'gamnoy metallurgii (Research on the Electrochemistry of Water Solutions, Fusions and Amalgam Metallurgy) Alma-Ata, Izd-vo AN Kaz. SSR, 1958. 122 p. (Series: Its: Trudy, t. 3) 1,300 copies printed.

Ed.: V.V. Aleksandriyskiy; Tech. ed.: Z.P. Borokina; Editorial Board of Series: I.I. Zabotin, V.M. Ilyushchenko, G.Z. Kir'yakov (Deputy Resp. Ed.), M.T. Kozlovskiy, (Resp. Ed.) and L.N. Sheludyakov.

PURPOSE: This book is intended for scientists and engineers in the electrochemical and nonferrous metal industries.

COVERAGE: This collection contains 14 reports by the Laboratories for Analytical Chemistry and Electrochemistry attached to the Institute of Chemical Sciences, Academy of Sciences, Kazakhstan Republic. The amalgam method of obtaining thallium from lead powder, the electrolysis of sulfate solutions of zinc and the impoverishment of waste slag during nickel production are described. The majority of articles have a practical nature and deal with problems of

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developing and perfecting new electrochemical methods for the production of nonferrous metals.

TABLE OF CONTENTS:

AVAILABLE: Library of Congress TM/mas

ILYUSHCHENKO, V.M.; KOZLOVSKIY, M.T.

Separation of cadmium and indium by anode oxidation of mixed amalgams. Izv. AN Kazakh. SSR. Ser.khim. no.1:23-28 '58. (MIRA 12:2)

(Cadmium--Analysis) (Indium--Analysis)
(Oxidation)

136-1-7/20

AUTHORS: Kozlovskiy, M.T., Zabotin, P.I., Ilyushchenko, V.M., Bukhman, S.P., Nosek, M.V., Sergiyenko, V.Ya. and Malkin, Ya.Z.

TITLE: Use of an Amalgam Method for Extracting Thallium from Chimkent Lead Works Dust (Primeneniye amal'gamnogo metoda k izvlecheniyu talliya iz pyley chimkentskogo svintsovogo zavoda)

PERIODICAL: Tsvetnyye Metally, 1958, No.1, pp. 30 - 41 (USSR).

ABSTRACT: The work described was based on theoretical and applied work on amalgam methods of separating and producing metals at the Chemical-sciences Institute of the Ac.Sc. KazakSSR (Institut khimicheskikh nauk AN KazSSR) and the Kazakhsk State University imeni S.M. Kirov (Kazakhskiy gosudarstvennyy universitet im. S.M. Kirova) under the direction of M.T. Koslovskiy (Refs. 1-8). The following participated in the work: A. Zebreva, Candidate of Chemical Sciences, V. Gladyshev of the University and M. Levanov, V. Prachev, Ye. Rubanova, M. Shalaginova, G. Nosov and Yu. Stolyarov of the Chimkentsk Lead Works. K. Simakov and L. Ushkov of the Works helped to organise the semi full-scale trials and I. Yudevich and N. Karpenko analysed spectroscopically for thallium and N. Popova did chemical and polarographic analyses with O. Orsa

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136-1-7/20

Use of an Amalgam Method for Extracting Thallium from Chimkent Lead Works Dust

of the Chemical-sciences Institute of the An KazSSR. Sintering-dust analyses for different periods are tabulated (Table 1) and laboratory-scale experiments with the dust are described. Here, roasting of 20-25 kg batches was carried out at 400 - 500 °C, showing (Fig.1) that an appreciable part of the sulphide sulphur and thallium is eliminated within the first hour at 400 °C. Four-fold leaching of the dust (two 250-g samples) with water at 80 - 90 °C showed (Table 3) that 80-90% of the thallium was extracted in the water, the extraction increasing with temperature. Cementation of thallium with zinc amalgam was carried out on the acidulated extract which was continuously circulated (Fig.3): the results (Table 4) showed that 98-99% extraction of thallium from the solution could be obtained. It was shown that the amalgam (originally 0.36 - 0.40 g/litre Zn, 0.127 g/litre Cd and 108 mg/litre Tl) could be decomposed by anodic oxidation with special electrolytes at current densities of 100 - 50 A/m^2, the density being gradually reduced as the appropriate metal was removed from the amalgam. The flow-sheet based on the laboratory results (Fig.4) was put into practice in a larger scale plant (Fig.5) at the Chimkensk Works, where it

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136-1-7/20

Use of an Amalgam Method for Extracting Thallium from Chimkent Lead Works Dust

treated several tons of dust from April to October, 1956 and was used for balance experiments in October of that year. The article gives details of the different stages and balances for the different metals. These show that with the proposed method pure metallic thallium can be obtained with a yield of 65%, about 30% being in returns and 5% being lost. An editorial note invites discussion on the amalgam method. There are 5 figures, 13 tables and 10 Russian references.

ASSOCIATION: Institute of Chemical Sciences of the Ac. of Sc. KazSSR (Institut khimicheskikh nauk AN KazSSR) and Chimkent Lead Works (Chimkentskiy svintsovyy zavod)

AVAILABLE: Library of Congress

Card 3/3

KOZLOVSKIY, M.T.; NOSEK, M.V.; BUKHMAN, S.P.; ZABOTIN, P.I.; ILYUSHCHENKO, V.M.

Water leaching of thallium from agglomeration dust at the Chemkent lead smelting and refining works. Trudy Inst. khim. nauk AN Kazakh. SSR 3:5-14 '58. (MIRA 12:3)
(Thallium--Metallurgy)

KOZLOVSKIY, M.T.; BUKHMAN, S.P.; ILYUSHCHENKO, V.M.; ZABOTIN, P.I.

Cementation of thallium from industrial solutions by zinc amalgam. Trudy Inst. khim. nauk AN Kazakh. SSR 3:15-19 '58. (MIRA 12:3)

(Thallium--Metallurgy) (Amalgamation)

KOSLOVSKIY, M.T.; ILYUSHCHENKO, V.M.; ZABOTIN, P.I.; NOVEK, M.V.; BUKHMAN, S.P.; ~~ZERNOVA, A.I.~~

Electrolytic decomposition of amalgams during production of thallium from dusts at the Chimkent lead smelting and refining works. Trudy Inst. khim. nauk AN Kazakh. SSR 3:20-28 '58. (MIRA 12:3)

(Amalgamation) (Thallium--Electrometallurgy)

MOSEK, M.V.; ILYUSHCHENKO, V.M.; KOZLOVSKIY, M.T.

Investigation of the potentials of amalgams of some metals during anodic oxidation in a sulfate - ammonia electrolyte. Trudy Inst. khim. nauk AN Kazakh. SSR 3:29-38 '58. (MIRA 12:3)
(Amalgams) (Oxidation)

KOZLOVSKIY, M.T.; ZABOTIN, P.I.; ILYUSHCHENKO, V.M.; BUKHMAN, S.P.; NOSEK, M.V.; SERGIYENKO, V.Ya.; MALKIN, Ya.Z.

Using the amalgamation method for the recovery of thallium from dusts of the Chimkent Lead Refinery. TSvet.met. 31 no.1:30-41 Ja '58. (MIRA 11:2)

1. Institut khimicheskikh nauk AN KazSSR i Chimkentskiy svintsovyy zavod.

(Thallium) (Chimkent--Lead ores)

VOROB'YEVA, G.F.; ILYUSHCHENKO, V.M.

Separation of antimony and indium by the anodic oxidation of mixed amalgams. Izv.AN Kazakh.SSR.Ser.khim. no.1:39-43 '59. (MIRA 13:6)

(Indium-Mercury alloys--Analysis)
(Antimony-Mercury alloys--Analysis)

GLADYSHEV, V.P.; ILYUSHCHENKO, V.M.; KOZLOVSKIY, M.T.

Causes of sludge formation in the preparation of thallium by the amalgam method. Izv. AN Kazakh. SSR Ser. khim. no. 2:67-74 '60. (MIRA 14:5)

(Thallium)

ILYUSHCHENKO, V.M.; AABOTIN, P.I.; KOZLOVSKIY, M.T.; PORUBAYEV, V.P.

Oxidation potentials of lead and thallium amalgams in alkaline solutions. Trudy Inst.khim.nauk AN Kazakh.SSR 6:54-60 '60. (MIRA 14:4)

(Amalgams) (Electromotive force)

ILYUSHCHENKO, V.M.; KOZLOVSKIY, M.T.; PORUBAYEV, V.P.

Use of trilon B in thallium refining. Trudy Inst.khim.nauk AN Kazakh. SSR 6:61-66 '60. (MIRA 14:4)
(Thallium) (Acetic acid)

ILYUSHCHENKO, V.M.; KOZLOVSKIY, M.T.

Cementation of copper-cadmium solutions with zinc amalgam.
Izv.AN Kazakh. SSR. Ser.khim. no.1:47-51 '61. (MIRA 16:7)
(Intermetallic compounds) (Cementation (Metallurgy))

KIR'YAKOV, Gleb Zakharovich; PONOMAREV, V.D., akademik, retsenzent; SONGINA, O.A., doktor khim. nauk, retsenzent; KARANOV, B.N., doktor khim. nauk, retsenzent; KUSHNIKOV, Yu.A., kand. khim. nauk, retsenzent; ILYUSHCHENKO, V.M., kand. khim. nauk, retsenzent; KOZIN, L.F., kand. khim. nauk, otv. red.; IVANOVA, E.I., red.

[Electrode processes in sulfuric acid solutions of zinc] Elektrodnye protsessy v sernokislykh rastvorakh tsinka. Alma-Ata, Nauka, 1964. 186 p. (MIRA 17:12)

1. Akademiya nauk Kaz.SSR (for Ponomarev).

PODGAYETSKIY, V.V.; ILYUSHENKO, V.M.

Effect of alkali metal weldments on the porosity of joints welded under flux. Avtom. svar. 17 no.10:26-30 O '64. (MIRA 18:1)

1. Institut elektrosvarki imeni Ye.O.Patona AN UkrSSR.

ILYUSHCHENKO, V.N.

Indicator burner. Zashch. rast. ot vred. i bol. 9 no.2: 32 '64. (MIRA 17:6)

1. Starshiy agronom Zakarpatskogo fumigatsionnogo otryada.

ILYUSHCHENKO, V.N.

Reconstruction of the ONK sprayer. Zashch. rast. ot vred. i bol. 7 no.10:18-19 O '62. (MIRA 16:6)

1. Agronom po zashchite rasteniy Uzhgorodskogo rayona.
(Spraying and dusting equipment)

I.YUSHCHENKO, V.N.

Fumigation in railroad cars. Zashch. rast. ot vred. i bol. 9 no.6:44 '64 (MIRA 17:7)

1. Starshiy agronom Zakarpatskogo fumigatsionnogo otryada.

ILYUSHCHENKO, V.N., agronom; MOLNAR, G.B., tekhnik

Determining the effectiveness of fumigation. Zashch. rast. ot vred. i bol. 9 no.12:41 '64. (MIRA 18:4)

1. Zakarpatskiy fumigatsionnyy otryad.

ILYUSHCHENKO, Ya.S.

Results of the work of the No.2 Bakery of the Donetsk Baking Combine.
Khar. prom. no.3:18-20 Jl-S '65. (MIRA 18:9)

SOV/137-58-11-23453

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 11, p 230 (USSR)

AUTHORS: Kiselev, G. I., Ilyushchenkov, M. A.

TITLE: Physico-mechanical Properties of Low-carbon Steels (Fiziko-mekhanicheskiye svoystva malouglerodistykh staley)

PERIODICAL: V sb.: Issled. po fiz. tverdogo tela. Moscow, AN SSSR, 1957, pp 262-272

ABSTRACT: Mechanical properties (a_k at temperatures ranging from +25 to -70°C, σ_b, δ, ψ, and H_B before and after natural aging), electrical conductivity, and magnetic characteristics of three smeltings of low-carbon steel produced by the method of direct reduction in a special electrical furnace, were studied. The steel contained 0.038-0.10% C, 0.17-0.34% Mn, traces to 0.08% Si, 0.01-0.018% P, and 0.031% S. The tests were carried out on specimens which had not been treated after hot rolling, specimens which had been annealed at various temperatures, and specimens which had been quenched and tempered. It is established that mechanical properties of steels produced by the method of direct reduction of iron from ore with

Card 1/2

SOV/137-58-11-23453

Physico-mechanical Properties of Low-carbon Steels

subsequent refining by means of heat treatment approach the properties of commercially pure iron and possess characteristics that are superior to those of Armco iron. With regard to electrical and magnetic properties, as well as the effects of aging, the steels investigated do not differ from standard steels. Bibliography: 16 references.

T. F.

Card 2/2

SAVITSKIY, K.V.; ZAGREBENNIKOVA, M.P.; ILYUSHCHENKOV, M.A.

Thermal stability at various friction conditions of cold hardening of surface layers of metal. Izv. vys. ucheb. zav.; fiz. no.3: 155-157 '58. (MIRA 11:9)

1. Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosuniversitete imeni V.V. Kuybysheva.
(Steel--Hardening)

ILYUSHCHENKOV, M.A.

SOV/123-59-15-58959

Translation from: Referativnyy zhurnal. Mashinostroyeniye, 1959, Nr 15, p 17 (USSR)

AUTHORS: Savitskiy, K.V., Ilyushchenkov, M.A.

TITLE: Investigations of the Temperature Resistance of the Hardened Surface Layers of Metals Undergoing Friction Stress at Various Normal Loads

PERIODICAL: Uch. zap. Tomskiy un-t, 1958, Nr 32, pp 182 - 187

ABSTRACTS: Tests were made with specimens of low-carbon steel and commercial copper. The data obtained show that changes in the state of the outer layers of rubbing bodies are taking place on account of an increase of pressure (load). The existence of a close relation between the magnitude of residual deformation and hardness permits one to make a conclusion, on the basis of measurements of the microhardness, concerning the qualitative differences of stress deformation, resulting from a change in the friction conditions. It can be presumed that an increase of pressure on the contact surface of rubbing bodies leads to a redistribution of deformations

Card 1/2

Investigations of the Temperature Resistance of the Hardened Surface Layers of Metals Undergoing Friction Stress at Various Normal Loads

SOV/123-59-15-58959

directed to their higher temperature resistance. In this connection a preliminary treatment of the friction surfaces at as great loads as possible may serve as an additional technological factor of the hardening of the outer layers of rubbing bodies.

B.A.M.

Card 2/2

28 (5) 05749

AUTHORS: Zagrebennikova, M. P., Ilyushchenkov, M. A., Sukharina, N. N. SOV/32-25-10-38/63

TITLE: Arrangement for the Compression-testing of Materials at Negative Temperatures

PERIODICAL: Zavodskaya laboratoriya, 1959, Vol 25, Nr 10, pp 1247 - 1248 (USSR)

ABSTRACT: The devices at present used for the compression-testing of materials at low temperatures have several disadvantages: Thus, the coolant can be poured on to the sample only at room temperature or at its boiling point temperature (Refs 1-3), so that only certain coolants may be used (Refs 2,3); or there is no possibility of using thermocouples for measuring the temperature of the sample (Ref 4) etc. A device was constructed in which these disadvantages are eliminated (Figure). It has a container for the cooling fluid, which is in form of a case, which contains the sample and the pressure piston. The small table upon which the sample is placed, and the piston are made from heat-conducting steel of the type R18. The thermocouple used for measuring the temperature of the sample is inserted into the table from below.

Card 1/2

Arrangement for the Compression-testing of Materials at Negative Temperatures

05748
SOV/32-25-10-38/65

As the sample does not come into contact with the coolant, it is possible to use liquid air enriched with oxygen (as produced in devices of the type SK-05). It is possible to produce a stable temperature of down to -100°, and after a slight alteration of the device also down to -180°. There are 1 figure and 4 Soviet references.

ASSOCIATION: Sibirskiy fiziko-tekhnicheskiy nauchno-issledovatel'skiy institut (Siberian Physico-technical Scientific Research Institute)

Card 2/2

SAVITSKIY, K.V., doktor fiz.-matem.nauk, prof.; ILYUSHCHENKOV, M.A.; BYKONYA, A.F.; BURNAKOV, K.K.

Investigation of the abrasive capacity of grinding wheels with a ceramic binder. Vest.mashinostr. 43 no.5:60-62 My '63. (MIRA 16:5)

(Grinding wheels--Testing)

ILYUSHCHENKOV, M.A.; SAVITSKIY, K.V.; KASHCHEYEV, V.N.

Increasing the abrasive capacity of the corundum and carborundum grain by vacuum thermal treatment. Izv. vys. ucheb. zav.; fiz. 8 no.1:178-179 '65. (MIRA 18:3)

1. Sibirskiy fiziko-tekhnicheskiy institut imeni akademika Kuznetsova.

L 8910-66 EWP(e)/EWT(m)/EIC/EWG(m)/T/EWP(t)/EWP(b) IJP(c) JD/JG/AT/AH

ACC NR: AP5027595 UR/0145/65/000/009/0137/0142

AUTHOR: Savitskiy, K. V. (Doctor of Physico-mathematical Sciences, Professor); Ilyushchenkov, M. A. (Aspirant); Karyopolova, T. D. (Aspirant); Bykova, A. F. (Aspirant)

ORG: Siberian Technico-Physical Institute (Sibirskiy fiziko-tekhnicheskiy institut)

TITLE: Vacuum heat treatment of high-melting, high-hardness chemical compounds. 1. Silicon carbide

SOURCE: IVUZ. Mashinostroyeniye, no. 9, 1965, 137-142

TOPIC TAGS: heat treatment, silicon carbide, crystal property, CRYSTALLOGRAPHY, SOLID MECHANICAL PROPERTY

ABSTRACT: The article examines the effect of temperature and of the duration of vacuum annealing on the strength properties of technical grade silicon carbide. Crystals of black silicon carbide with a particle size of 1 and 2 mm were prepared. The shear fracture strength of the 2 mm particles was tested on a TsDM press at a loading rate of 6 mm min. Crystals of both sizes were tested for microhardness. The vacuum heat treatment was done in a special vacuum chamber which could sustain a temperature of 1200°C for an

Card 1/3 UDC: 546.281

L 8910-66

ACC NR. AP5027595

indefinite time at a vacuum of not less than 10^{-3} mm Hg. The crystals were treated for 5, 10, 20, 50 and 100 hours at 1200°C. At the end of the treatment, simultaneously with determination of strength and microhardness, the weight loss was determined, and the surface of the crystals was observed photographically. Results are shown in a table and a series of figures. Results show that the shear fracture strength of crystals of black silicon crystals increases with an increase in treatment temperature. The most intensive rise in strength takes place at a treatment temperature above 900°C; after treatment at 1200°C, the crystals are approximately 20% stronger. The most intensive increase in mechanical strength of the crystals was observed for those crystals which contained the most impurities. The magnitude of this effect increases with an increase in temperature and duration of treatment. The observed loss in weight is due in part to the elimination, under vacuum, of contaminants such as calcium oxide, aluminum oxide, and free carbon, and partly to the process of decomposition of the silicon carbide into more volatile compounds such as Si, SiO_2 and Si_2O. To obtain the highest mechanical properties, there is no apparent reason to increase the duration of the treatment at 1200°C beyond 20 to 40 hours. It would be required to raise the temperature

Card 2/3

L 8910-66

ACC NR: AP5027595

ceiling above 1200°C and to create a higher vacuum. Orig. art. has: 4 figures and 1 table.

SUB CODE: 07, 20/ SUBM DATE: 10Dec63/ ORIG REF: 007

OTH REF: 00

Card 3/3

L 20609-66 EWT(m)/EWP(e) WH

ACC NR: AP6010269 SOURCE CODE: UR/0145/66/000/001/0153/0157

AUTHOR: Savitskiy, K. V. (Doctor of physico-mathematical sciences; Professor); Ilyushchenkov, M. A. (Senior research associate); Burmakov, K. K. (Engineer); Muratova, L. V. (Engineer)

ORG: Siberian Institute of Engineering Physics (Sibirskiy fiziko-tekhnicheskiy institut)

TITLE: Vacuum firing of hard refractory compounds: aluminum oxide

SOURCE: IVUZ. Mashinostroyeniye, no. 1, 1966, 153-157

TOPIC TAGS: aluminum oxide, aluminum oxide firing, sapphire firing, vacuum firing

ABSTRACT: The effect of vacuum firing on the properties of four grades of aluminum oxide, OKS_1, standard electrocorundum, white electrocorundum, and sapphire, has been investigated. Vacuum firing at 600—1200C was found to increase the shear strength and microhardness and to bring about a weight loss. The magnitude of all three effects depended on the purity of aluminum oxide, and at a given purity on the firing temperature and time. For instance, firing at 1200C for 5 hr almost doubled the shear strength of standard (low-purity) electrocorundum, increased its microhardness from 1790 to 1970 kg/mm^2, and brought about a weight loss of 103.7 mg. In white (high purity) electrocorundum, the same treatment increased the shear strength by 25% and the microhardness from 2200 to 2360 kg/mm^2, and caused a weight loss of

UDC: 669.018.4

Card 1/2

L 20609-66

ACC NR: AP6010269

47.8 mg. Sapphire, the purest grade of aluminum, underwent only insignificant changes in microhardness and shear strength. However, its resistance to aggressive media increased considerably after 100 hr firing at 1200C, which is explained by a decrease in the dislocation density brought about by prolonged holding at 1200C. [DV]

Orig. art. has: 5 figures and 2 tables.

SUB CODE: 11/ SUBM DATE: 10Dec63/ ORIG REF: 007/ OTH REF: 002/ ATD PRESS: 4226

Card 2/2

TA 6/49743

IL'YUSHECHKIN, D.

Apr 48

USSR/Engineering
Efficiency, Industrial
Trailers

"Competition for Improving Labor's Output," D. Il'yushechkin, Maintenance Manager, "Soyuzmagottrans," Crimean Trust, 1 p

"Avtomobil'" No 4

Crimean Autobase drivers are competing with each other in regard to best utilization of trailers. Movement was started by Simferopol Autobase, whose trailer utilization coefficient rose from 0.46 to 0.84 during 1947.

6/49743

ILYUSHECHKIN, V.I.; TRIFONOV, I.M.

Anniversary heroes bear added obligations. Transp. stroi. 14 no.10:33 O '64. (MIRA 18:3)

1. Nachal'nik Leningradskoy NIS Orgtransstroya (for Ilyushechkin).
2. Starshiy inzh. Leningradskoy NIS Orgtransstroya (for Trifonov).

U CHZHUAN-DA [Wu, Chuang-ta]; BUTENKO, M.A. [translator]; ILYUSHECHKIN, V.P. [translator]; GLUSHAKOV, P.I., redaktor; PARCHEVSKIY, O.K., redaktor; BELEVA, M.A., tekhnicheskiy redaktor

[Taiwan. Translated from the Chinese] Taiwan'. Perevod so vtorogo kitaiskogo izdaniia M.A.Butenko i V.P.Iliushechkina. Red. P.I. Glushakova. Moskva, Izd-vo inostrannoi lit-ry, 1955. 66 p. (MIRA 9:10)
(Formosa)

LYU SHI-TSI [Idu, Shih-Ch'i]; ILYUSHENCHKIN, V.P. [translator]; MITBREYT, B.A. [translator]; OVDIYENKO, I.Kh. [translator]; TERENT'YEVA, V.F. [translator]; VARENITS, Ye.T., red.; AFANAS'YEVSKIY, Ye.A., red.; IOVLEVA, N.A., tekhn. red.

[Agricultural geography of China] Geografiia sel'skogo khoziaistva Kitaia Vstup. stat'ia i red. E.T. Varenitsa. Moskva, Izd-vo inostr. lit-ry, 1957. 402 p. (MIRA 11:10)
(China--Agriculture)

PHASE I BOOK EXPLOITATION SOV/4893

Vsesoyuznoye soveshchaniye po fizike, fiziko-khimicheskim svoystvam ferritov i fizicheskim osnovam ikh primeneniya. 3d, Minsk, 1959

Ferrity; fizicheskiye i fiziko-khimicheskiye svoystva. Doklady (Ferrites; Physical and Physicochemical Properties. Reports) Minsk, Izd-vo AN BSSR, 1960. 655 p. Errata slip inserted. 4,000 copies printed.

Sponsoring Agencies: Nauchnyy sovet po magnetizmu AN SSSR. Otdel fiziki tverdogo tela i poluprovodnikov AN BSSR.

Editorial Board: Resp. Ed.: N. N. Sirota, Academician of the Academy of Sciences BSSR; K. P. Belov, Professor; Ye. I. Kondorskiy, Professor; K. M. Polivanov, Professor; R. V. Telesnin, Professor; G. A. Smolenskiy, Professor; R. N. Shol'ts, Candidate of Physical and Mathematical Sciences; E. M. Smolyarenko; and L. A. Bashkirov; Ed. of Publishing House: S. Kholyavskiy; Tech. Ed.: I. Volokhanovich.

PURPOSE: This book is intended for physicists, physical chemists, radio electronics engineers, and technical personnel engaged in the production and use of ferromagnetic materials. It may also be used by students in advanced courses in radio electronics, physics, and physical chemistry.

COVERAGE: The book contains reports presented at the Third All-Union Conference on Ferrites held in Minsk, Belorussian SSR. The reports deal with magnetic transformations, electrical and galvanomagnetic properties of ferrites, studies of the growth of ferrite single crystals, problems in the chemical and physicochemical analysis of ferrites, studies of ferrites having rectangular hysteresis loops and multicomponent ferrite systems exhibiting spontaneous rectangularity, problems in magnetic attraction, highly coercive ferrites, magnetic spectroscopy, ferromagnetic resonance, magneto-optics, physical principles of using ferrite components in electrical circuits, anisotropy of electrical and magnetic properties, etc. The Committee on Magnetism, AS USSR (S. V. Vonsovskiy, Chairman) organized the conference. References accompany individual articles.

Ferrites (Cont.) SOV/4893

AVAILABLE: Library of Congress (TK453.V75)

JA/dik/oo
5/2/61

Card 18/18

Shulga + Il'yushenko

IL'YUSHENKA, L. F.

SVIRSHCHEYSKAYA, M.M.; IL'YUSHENKA, L.F.

Magnetic defectoscopy of cutting tools. Vestsi AN BSSR no.1: 98-103 Ja-F 52. (MIRA 7:8)

(Cutting tools) (Metallography)

IL'YUSHENKO, L. F.

SVIRSHCHEVSKAYA, M.M.; IL'YUSHENKO, L.F.; TALAKO, G.S.

Magnetic control of hollow steel cylinders on deep hole drilling machines. Sbor.nauch.trud.Fiz.-tekh.inst.AN BSSR no.1:162-166'54. (MLRA 10:1)

(Magnetic testing) (Cylinders)
(Machinery industry--Quality control)

ILIYOSHENKO, L. F.

"Study of Magnetic Fields of Scattering Produced by Defects of Cylindrical Form".
Sb. Nauch. Tr. Fiz. in-ta AN Bel SSR, No 1, pp 171-183, 1954

Measurements are made of the normal and tangential components of a magnetic field over the side of a steel rod magnetized along its length, in which cross-section apertures were drilled at various depths below the tested side. Empirical formulas are suggested for evaluation of the depth and size of the embedded defects by noting the distortion of the magnetic field over the finished product. (RZhFiz, No 10, 1955)

SO: Sum No 812, 6 Feb 1956

30106
S/194/61/000/007/010/079
D201/D305

9.7140

AUTHORS: Il'yushenko, L.F. and Sheleg, M.U.

TITLE: Ferrite memory of the electronic computer of the AS Belorussian SSR

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 7, 1961, 15, abstract 7 B98 (V sb. Ferrity. Fiz. i fiz.-khim. svoystva, Minsk, AN BSSR, 1960, 645-652)

TEXT: The magnetic memory of the computer described utilizes the linear number selection method (method z). The ferrite memory cores perform not only the function of memorizing binary information, but are used as impulse sampling and pulse registration forming circuits. The duration of one cycle is 8 microseconds. The memory control circuit consists of standard computer circuits (trigger, gate) and of the basic following circuits gate-producing read-out pulses, storage gate, amplifier for the read-out signal which excites the magnetic decoder, produces recording of information, amplification

Card 1/2

USSR/Physics - Magnetization FD-2970

Card 1/1 Pub. 146 - 11/28

Author : Drokin, A. I.; Il'yushenko, V. L.

Title : Influence of the method of demagnetization of specimen upon the temperature dependence of magnetizability of nickel in weak fields

Periodical : Zhur. eksp. i teor. fiz., 29, September 1955, 339-344

Abstract : The authors investigate by two different methods the influence of the procedure of demagnetization of a specimen upon the temperature behavior of the intensity of magnetization of nickel in weak magnetic fields. He concludes that demagnetization by an alternating current decreasing uniformly to zero creates a definate texture of antiparallel oriented spin moments which causes a difference in the temperature behavior of nickel's intensity of magnetization, such a texture ensuring preeminently longitudinal inversion occurring in weaker fields than transverse inversion does. Ten references: e.g. V. F. Ivler, Izv. AN SSSR, Ser. fiz., 16, 664, 1952.

Institution : Krasnoyarsk State Pedagogic Institute

Submitted : June 10, 1954

ILYUSHENKO, V. L.

IL'YUSHENKO, V. L.

"Influence of Temperature upon the Number and Magnitude of Irreversible Leaps in Remagnetization of Iron." Min Education RSFSR, Moscow Oblast Pedagogic Inst, Moscow, 1955. (Dissertation for the Degree of Candidate of Mathematical Sciences.)

SO: M-972, 20 Feb 56

Il'yushenko, V. L.

Effect of the method of demagnetization of the sample on the temperature coefficient of the magnetic susceptibility of nickel in weak fields. A. I. Drokin and V. L. Il'yushenko. Soviet Phys., JETP 2, 191-6(1956)(English translation).—See C.A. 50, 3021a. B. M. H.

ILYUSHENKO, V. L., IVLEV, V. F., ASEYEVA, L. S., and LIPKIN, A. E. (Krasnoyarsk)

"The Study of Irreversible Jumps of Magnetic Reversal in Ferromagnetic Substances," paper presented at the International Conference on Physics of Magnetic Phenomena, Sverdlovsk, USSR, 23-31 May 1956.

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R000618520020-7"

IL'YUSHENKO, V. L.

48-9-10/26

AUTHORS: Ivlev, V. F., Il'yushenko, V. L., Asoyeva, L. I.

TITLE: An Investigation of the Irreversible Bounds of Magnetization in Ferromagnetica (Issledovaniye neobratimykh skachkov peremagnichivaniya v ferromagnetikakh).

PERIODICAL: Izvestiya AN SSSR Seriya Fizicheskaya, 1957, Vol. 21, Nr 9, pp. 1250-1254 (USSR.).

ABSTRACT: The purpose of the present paper was 1) to investigate the problem, wether the law established by one of the authors, saying that the number of bounds and their magnitude is decreasing according to an exponential law at a temperature rise, holds for ferromagnetica in general or only for nickel. 2) to perform an experimental investigation of the dependence of the number and of the magnitude of the bounds on the crystallographic ordering and its temperature dependence. It is shown, that the number of magnetic reversal bounds is essentially dependent upon the crystallographic direction, which means, that there exists a considerable anisotropy of the number of bounds. The minima and maxima of the number of bounds of all dimensions correspond to the identical crystallographic direction. It is shown, that in the case of a monocrystal sample of silicious iron the number of bounds is essentially de-

Card 1/2

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R000618520020-7"

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R000618520020-7"

ILYUSHIKIN, N.I.

Prevention of epidermophytosis in an army unit. Vest.derm. i ven. 32 no.3:73-76 My-Je '58 (MIRA 11:7)

(RINGWORM, prev. & control in army units (Rus))
(ARMED FORCES PERSONNEL, dis. athletes foot, prev. (Rus))
(FOOT, dis. ringworm, prev. in armed forces personnel (Rus))

BAYRAMOV, M., insh.; IL'YUSHIN, A., insh.

Conveyer line for processing unskinned hog heads. Mias.ind.SSSR 31 no.2:18-19 '60. (MIRA 13:8)

1. Bryanskiy myasokombinat.
(Swine)

BAYRAMOV, M.; IL'YUSHIN, A.

Modernising machines for removing hides. Mias.ind.SSSR 31 no.5:40-41 '60. (MIRA 13:9)

1. Bryanskiy myasokombat (for Il'yushin).
(Hides and skins) (Bryansk--Slaughterhouses)

BAYRAMOV, M.; IL'YUSHIN, A.

Stepping up the production rates. Mias.ind. SSSR 33 no.3:12-14 '62. (MIRA 15:7)

1. Bryanskiy myasokombinat.
(Briansk—Meat industry)

IL'YUSHIN, A.A.

K voprosu o poperechnykh kolebaniiakh i prodol'noi ustoichivosti sterzhnei peremennogo secheniia. (Moscow. Universitet. Uchenye zapiski, 1937. v.7. Mekhanika. p. 267-268)

Summary in English.

Title tr.: On the question of transverse vibration and longitudinal stability of rods with variable cross-sections.

Q.60.M868 1937, v.3

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

IL'YUSHIN, A. A.

"Viscous-Plastic Flow of Material," Trudy Konferentsii po Plasticheskim Deformatsiyam, AS USSR, 1938

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R000618520020-7"

IL'YUSHIN, A.A.

IL'YUSHIN, A. A.

Nekotorye voprosy teorii plasticheskikh deformatsii. (Prikladnaia matematika i mekhanika, 1943, v. 7, no. 4, p. 245-272, diagrs., bibliography)

Summary in English.

Title tr.: Some problems in the theory of plastic deformations.

QA801. P7 1943

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

IL'YUSHIN, A.A.

IL'YUSHIN, A. A.

Priblizhennaia teorii uprugo-plasticheskikh deformatsii osesimmetrichnoi obolochki. (Prikladnaia matematika i mekhanika, 1944, v. 8, no 1, p. 15-24)

Title tr.: Approximate theory of elastic-plastic deformations of shells with axial symmetry.

QA801.P7 1944

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

IL'YUSHIN, A.A.

IL'YUSHIN, A. A.

Ustoichivost' plastinok i obolochki za predelom uprugosti. (Prikladnaia matematika i mekhanika, 1944, v. 8, no. 5, p. 337-360)

Summary in English.

Title tr.: Stability of plates and shells beyond the proportional limit.

QA801.P7 1944

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

IL'YUSHIN, A.P.

IL'YUSHIN, A. A.

Konechnoe sootnoshenie mezhdu silami i momentami i svim'ikh s deformatsiiami v teorii obolochek. (Prikladnaia matematika i mekhanika, 1945, v. 9, no. 1, p. 101-110, diagrs.)

Summary in English.

Title tr.: A finite relation between the forces and moments and their connection with the deformations in the theory of shells.

QA801. P7 1945

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

IL'YUSHIN, A. A.

Sviaz' mezhdu teorieĭ Sen Venana - Levi - Mizesa i teorieĭ malykh upruga-plasticheskikh deformatsiĭ. (Prikladnaia matematika i mekhanika, 1945, v. 9, no. 3, p. 207-218, diagrs.)

Summary in English.

Title tr.: Relation between the theory of Saint Venant - Levy - Mises and the theory of small elastic-plastic deformations.

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

TIVGSHIN, A.A

stresses which occur during the buckling of the elastic-plastic plate. Simplifying and extending his earlier results (same journal, 8, 337, 362 (1941); Rev. Rev. 7, 44) the author shows that the problem [illegible] the deflection and the stress function. By a process of linearization these can be reduced to a single linear equation which

B

The Deformation of a Visco-Plastic Solid. A. A. Ilyushin. 149 pages. 1947. Graduate Division of Applied Mathematics, Brown University, Providence, R.I. (Translation RMB-21.) From *Uchenye Zapiski Moskovskogo Gosudarstvennogo Universiteta, Mekhanika*, 1940, p. 1-81.

The first chapter presents the general theory of deformations of a visco plastic body. The second, third, and fourth chapters are devoted to a new problem concerning the stability of the deformation of a visco-plastic body and to a study of neighboring motions. The fifth chapter deals with the problem of the compression of a cylindrical sample due to a blow. It also briefly presents the results of a considerable number of experiments performed on cylindrical samples and computed from theoretical formulas at the materials testing laboratory of the Moscow State University.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

182. Testing of Material at High Velocities. A. A. Ilyushin. David W. Taylor Model Basin, U.S. Navy (by Graduate Division of Applied Mathematics, Brown University). Translation RMB-37/28, 1947, 28 pages. From *Inzhenernyi Sbornik* (Engineering Symposium), no. 1, 1941, p. 13-26. Institute of Mechanics, Academy of Sciences, USSR.

Present results of some laboratory experiments performed in order to establish the physical constants of plastic deformation at high speeds; and describes a special pneumatic hammer for testing at speeds encountered in practice, as in high speed rolling and deformation of armor plate and shell bodies. Conventional testing equipment fails to give the necessary information for such applications of metals.

See also: No. 89 (cleavage-tear test)
No. 91 (brittle-transition-temperature tests)

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

B

4

Forming of Tubes. A. A. [illegible] David W. Taylor Model Basin, U.S. Navy (By Graduate Division of Applied Mathematics, Brown University), Translation RMB-34/8, 1947, 8 pages. From Inzhenernyi Sbornik (Engineering Symposium), no. 1, 1941, p. 37-42, Institute of Mechanics, Academy of Sciences, USSR.

Concerned with the forming of thin-walled tubes at elevated temperatures by means of axially symmetric dies or mandrels. It is shown that this method may be used for the production of shells of revolution with variable wall thickness.

METALLURGICAL LITERATURE CLASSIFICATION

Some Problems in the Theory of Plastic Deformation. A. A. Ilyushin. 49 pages. 1946. U.S. Navy, David W. Taylor Model Basin, Washington. (Transl. 12.) Translated from *Prikladnaia Matematika i Mekhanika*, v. 7, 1943, p. 245-272.

Gives details of the fundamental laws of elastic and plastic deformation. This is followed by a presentation of conditions of equilibrium; two general methods for solution of elastic-plastic problems; and equations for deformation of thick plates and for axially-symmetric deformation of cylindrical shells.